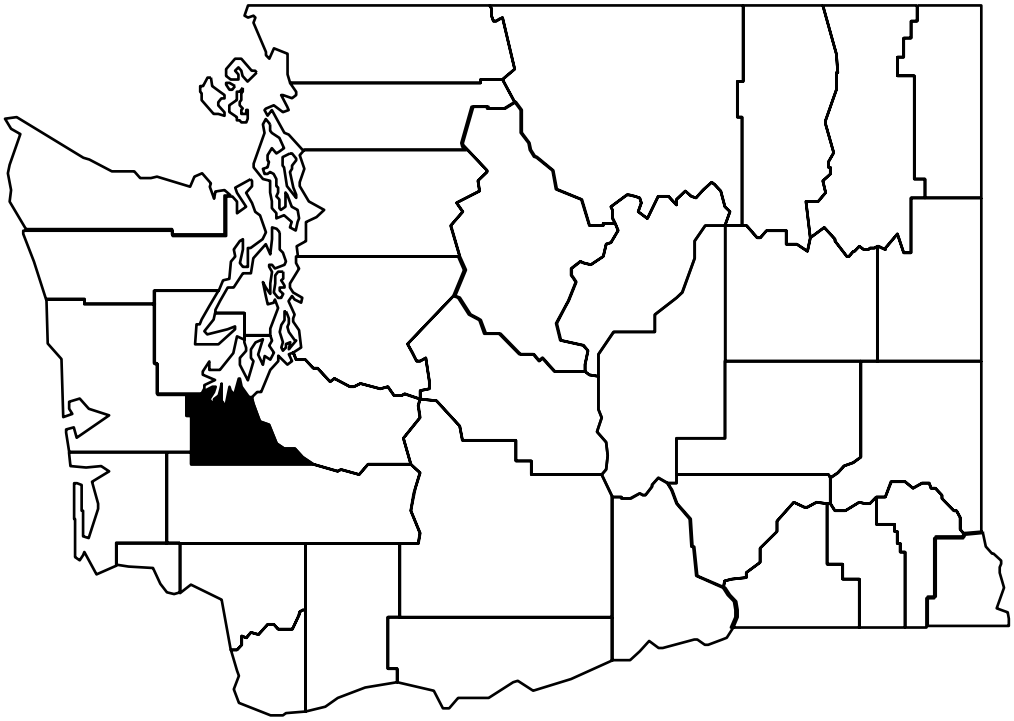
Sexually Transmitted Disease Profile

Thurston County 2004



Washington State Department of Health

Summary

This report describes the sexually transmitted disease burden in Thurston County. Primary emphasis is placed on chlamydia and gonorrhea since they are the most frequently reported STDs in Washington State. The 2004 incidence rates by age and sex for gonorrhea and chlamydia are presented. The report concludes with a presentation of which providers in your county reported STDs.

Contents

Thurston County STD Disease Trends

Table 1: **Washington State** Reportable Sexually Transmitted Diseases, Thurston County, 2004

Disease	2003 Thurston County Cases	2004 Thurston County Cases	2004 Thurston County Rate[λ] (per 100,000)	2004 Washington State Rate[λ] (per 100,000)
Chlamydia	511	552	253	286
Gonorrhea	37	43	20	46
Early Syphilis	0	2	*	3.3
Congenital Syphilis	0	0	-	0.0 (live births)
Late/Late Latent Syphilis	2	2	*	2.2
Herpes (initial infection)	87	70	32	35
GI/LGV/Chancroid**	0	0	-	0.0
HIV cases**	5	11		
AIDS cases**	6	4		
TOTAL (excluding HIV/AIDS cases)	**637**	**667**	**306**	**372**

[λ] *Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004.*
** Rates cannot be calculated for years with fewer than five cases.*
*** See Appendix A for explanation of disease acronyms.*

In 2004, Thurston County experienced an increase from 2003 in its combined reportable STD cases. With 667 cases of STDs (excluding HIV/AIDS cases[1]) in 2004, the incidence rate for all STDs was 306 per 100,000 persons. This is 18% less than the 372 per 100,000 combined reportable STD rate for Washington State in 2004. Thurston County reported no cases of congenital syphilis or GI/LGV/Chancroid in 2004.

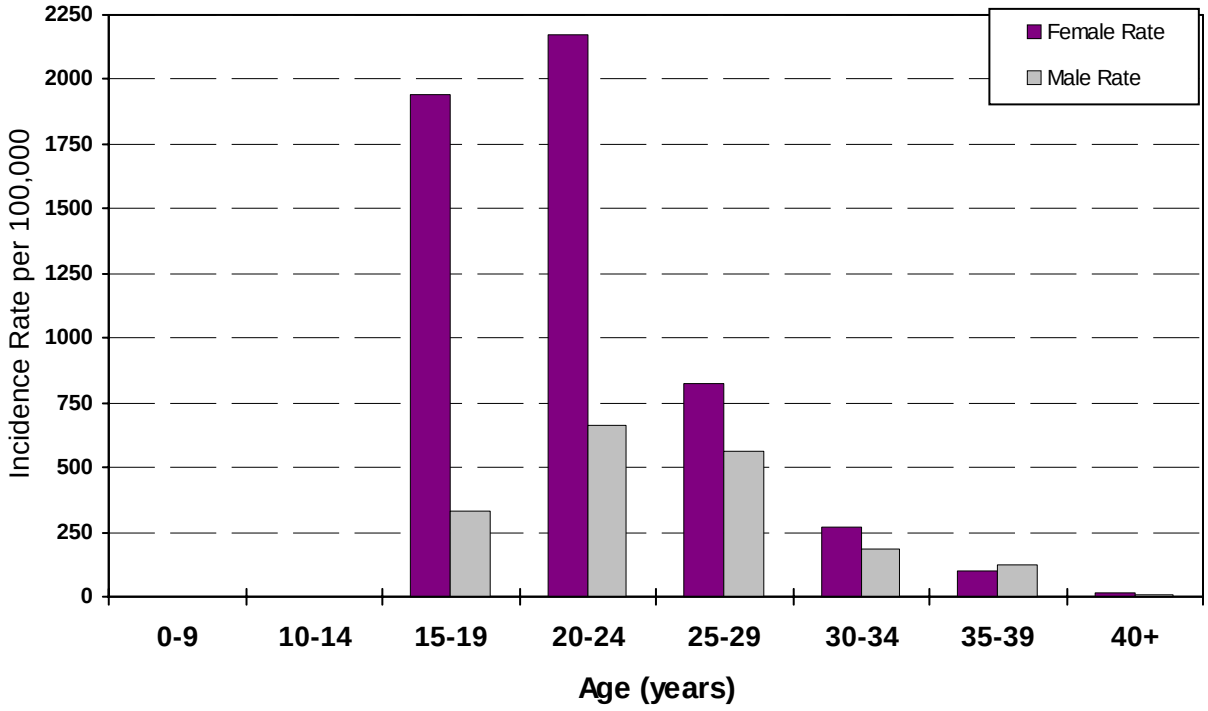
2004 compared to 2003:

- Chlamydia had an 8% increase in reported cases (552 vs. 511).
- Gonorrhea had a 16% increase in reported cases (43 vs. 37).
- In 2004 - two (2) cases of early syphilis were reported. Zero (0) cases of early syphilis were reported in 2003.
- Late/late latent syphilis had a no change in reported cases (2 vs. 2).
- Initial infection herpes had a 20% decrease in reported cases (70 vs. 87).

[1] Complete information on the HIV/AIDS epidemic in Washington can be found in Washington State HIV/AIDS Surveillance Report, Washington State Department of Health, IDRH Assessment Unit.

Chlamydia

Figure 1: **Chlamydia** Incidence Rates by Age and Gender, Thurston County, 2004[λ]



Female Rate	*	*	1941	2176	826	273	104	11
Male Rate	0	0	328	663	564	186	121	13
Female Cases	1	1	155	164	53	19	8	6
Male Cases	0	0	28	50	37	13	9	6

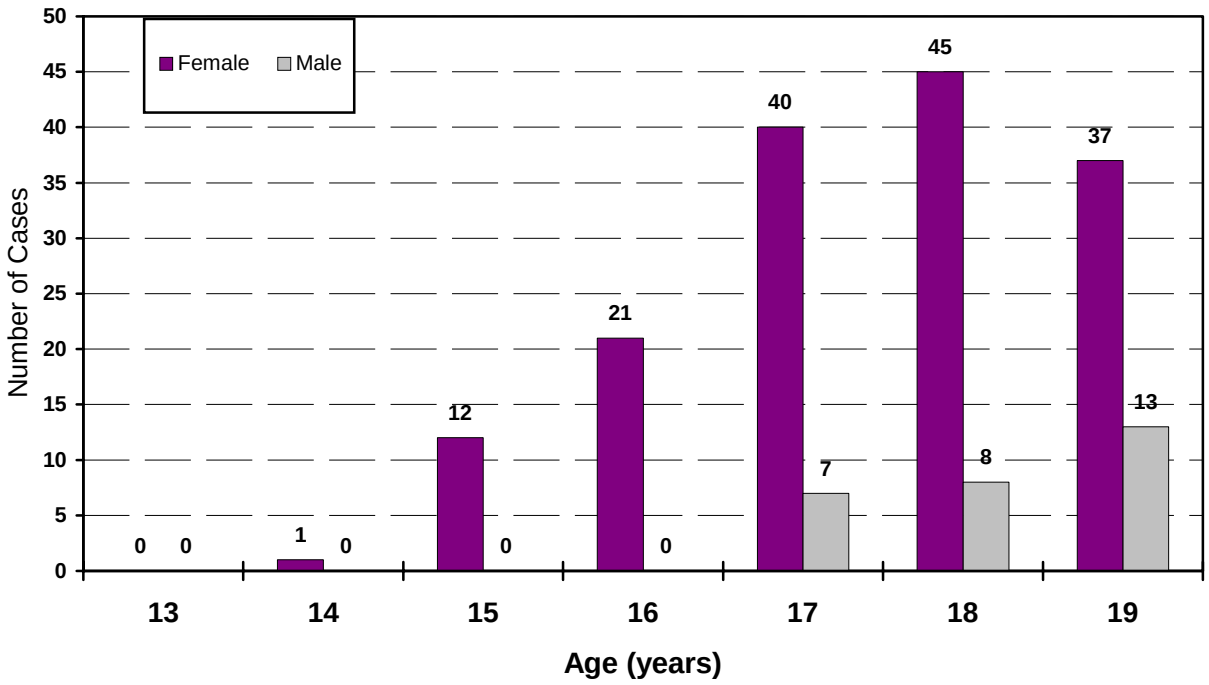
[λ] *Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004. Incidence rates rounded to the nearest whole number.*
** Rates cannot be calculated for ages with fewer than five cases.*

In 2004, the female chlamydia incidence rate was highest among the 20-24 year old age group in Thurston County, at 2,176 cases per 100,000. Chlamydia incidence among females progressively declined with increasing age. Among the men in Thurston County, the 2004 chlamydia incidence rate was highest among 20-24 year olds at 663 cases per 100,000 then declined with increasing age.

Women are preferentially screened for chlamydia. Because active case-finding is preferentially limited to women, the incidence of chlamydia in men may be under-reported by comparison. Caution should be used in interpreting comparisons of chlamydia rates between genders.

The 2002 STD Treatment Guidelines from CDC recommend that all women diagnosed with chlamydia be re-screened three to four months after treatment. This was suggested because of the high prevalence of chlamydia found in women diagnosed with the disease in the preceding months, presumably as a result of re-infection.

Figure 2: **Chlamydia** Cases by Age (13 – 19) and Gender, Thurston County, 2004



Repeater Infections (Persons having more than one infection in a 12-month period.)

Recurrent infection is common and associated with increased risk of pelvic inflammatory disease (PID) and other serious outcomes. Data suggest that young age and incomplete therapy increase the risk for persistent/recurrent infection. Studies also suggest that women's current male sex partners are not receiving treatment for chlamydia and that women are being re-infected by resuming sex with previous (and infected) sex partners. Careful interviewing and prompt, concurrent treatment of all partners is important. People should be coached to ask health care providers for re-screening.

Table 2: **Chlamydia** Repeater Infections, Thurston County, 2004.

	MALE	FEMALE	TOTAL
Reported Cases	146	406	552
Repeaters Identified	9	45	54
% Repeaters	6.2%	11.1%	9.8%

Asymptomatic Infection

STD infections often lack any signs and symptoms. Routine screening and treatment is essential to prevent serious complications that may not appear until long after infection. Screening all sexually active adolescents (19 years and younger) during sports physicals and routine office

visits should be done even if symptoms are not present. Screening women and men aged 20-25 is also suggested, particularly those who have new or multiple sex partners. Women who are pregnant, have sex partners infected with chlamydia, have mucopurulent cervicitis or are planning an IUD insertion should also be screened. Careful interviewing and treatment of all partners is important.

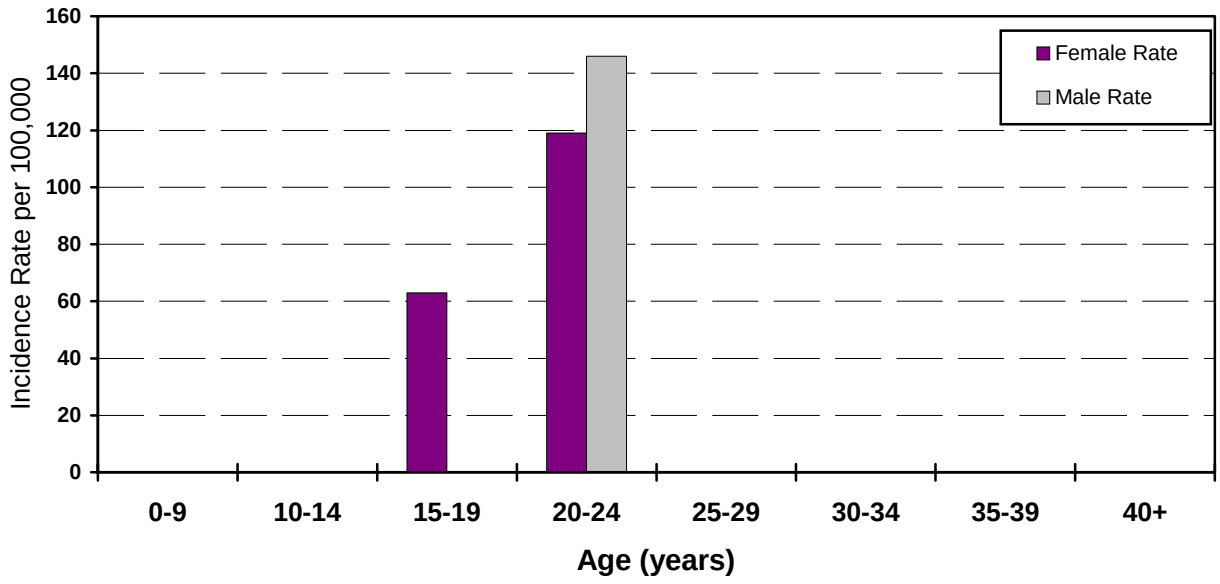
Table 3: Reported Cases of **Chlamydia** by Diagnostic Category, Thurston County, 2004.

Diagnosis	Private		Public		Total		Total Cases
	Male	Female	Male	Female	Male	Female	
Asymptomatic	**35**	**206**	**42**	**59**	**77**	**265**	**342**
Symptomatic-Uncomplicated	38	102	26	20	64	122	186
Pelvic Inflammatory Disease	0	7	0	2	0	9	9
Other	1	0	2	0	3	0	3
Unknown	0	1	2	9	2	10	12
TOTAL	**74**	**316**	**72**	**90**	**146**	**406**	**552**

Gonorrhea

In 2004, the female gonorrhea incidence rate was highest among the 20-24 year old age group in Thurston County, at 119 cases per 100,000. Among in men Thurston County, the 2004 gonorrhea incidence rate was highest among 20-24 year olds at 146 cases per 100,000 then declined with increasing age.

Figure 3: **Gonorrhea** Incidence Rates by Age and Sex, Thurston County, 2004[λ]



Female Rate	0	*	63	119	*	*	*	*
Male Rate	0	0	0	146	*	*	0	*
Female Cases	0	1	5	9	2	3	1	3
Male Cases	0	0	0	11	3	2	0	3

[λ] *Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004. Incidence rates rounded to the nearest whole number.*
** Rates cannot be calculated for years with fewer than five cases.*

In Washington State the reported rate of gonorrhea incidence in 2004 was 46/100,000, a slight increase from the 2003 rate. Statewide, the greatest incidence of disease among females was among 15-19 year olds (198/100,000), while for males the burden of disease is distributed more evenly among those older. Males had a higher gonorrhea rate (51/100,000) than females (40/100,000). A major factor contributing to the distribution of gonorrhea incidence in different age groups among men or women is a documented outbreak among men who have sex with men (MSM) whose median reported age was 30.

Findings from the Gonococcal Isolate Surveillance Project (GISP) in Seattle have indicated that Washington State is now an area with increased prevalence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG). Based on these findings, the Washington State Department of Health recommends that health care providers in the state should no longer use fluoroquinolones (ciprofloxacin, levofloxacin and ofloxacin) as first line therapy for gonorrhea. The antibiotics of

choice are ceftriaxone (Rocephin™) or cefpodoxime (Vantin™) accompanied by either azithromycin or doxycycline to treat possible coexisting chlamydial infection.

Figure 4: **Gonorrhea** Cases by Age (13 – 19) and Gender, Thurston County, 2004

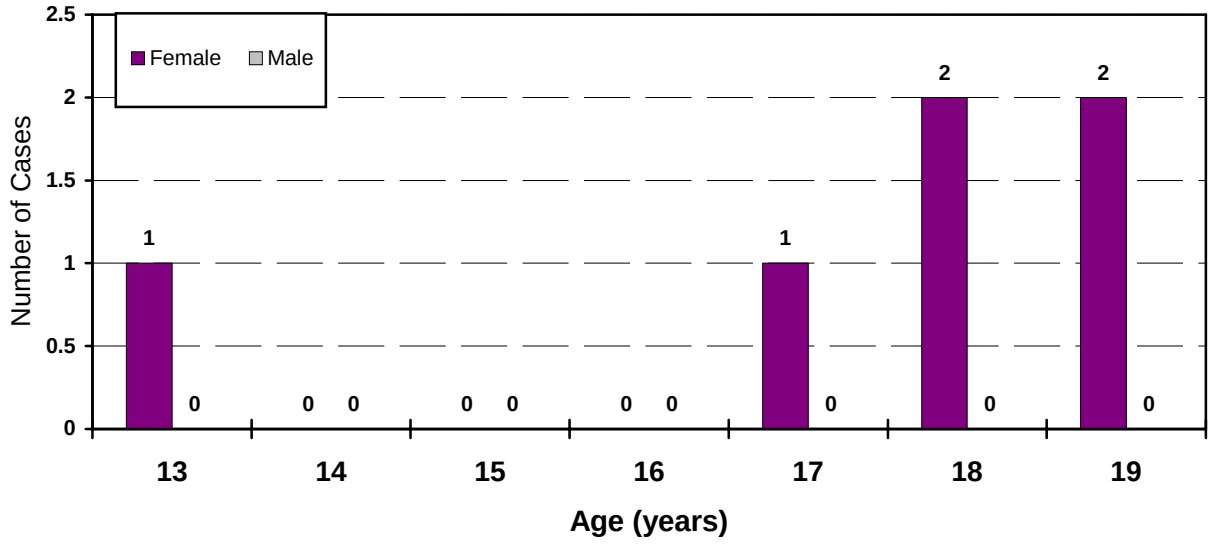


Table 4: **Gonorrhea** Repeater Infections, Thurston County, 2004.

	MALE	FEMALE	TOTAL
Reported Cases	19	24	43
Repeaters Identified	0	1	1
% Repeaters	0.0%	4.2%	2.3%

Because most gonorrhea infections cause symptoms and prompt individuals to seek medical care, reported cases are considered to be an accurate reflection of true disease incidence in the overall population. Providers in Washington State who reported gonorrhea cases in 2004 indicated that 80% of the men were symptomatic for gonorrhea; 43% of the women were symptomatic.

Table 5: Reported Cases of **Gonorrhea** by Diagnostic Category, Thurston County, 2004.

Diagnosis	Private		Public		Total		Total Cases
	Male	Female	Male	Female	Male	Female	
Asymptomatic	2	12	1	0	3	12	15
Symptomatic-Uncomplicated	**10**	**11**	**6**	**1**	**16**	**12**	**28**
Pelvic Inflammatory Disease	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
TOTAL	**12**	**23**	**7**	**1**	**19**	**24**	**43**

Conclusion

Table 6: Reported Cases of Chlamydia and Gonorrhea by Provider Type, Thurston County, 2004

Provider Type	Chlamydia			Gonorrhea		
	No. of Providers	No. of Cases	Percent of Total Cases	No. of Providers	No. of Cases	Percent of Total Cases
Alcohol/Substance Abuse						
Blood Bank/Plasma Center						
Community Health Center	2	8	1%	2	2	5%
Emergency Care (excl. hosp.)	2	2	0%			
Family Planning	5	153	28%	1	5	12%
Health Plan/HMOs	1	38	7%	1	1	2%
HIV/AIDS						
Hospitals	4	40	7%	2	11	26%
Indian Health	1	5	1%			
Jail/Correction/Detention	1	1	0%			
Job Corps						
Migrant Health	1	1	0%			
Military	2	26	5%	1	1	2%
Neighborhood Health						
OB/GYN	5	64	12%	2	5	12%
Other	28	81	15%	6	8	19%
Private Physicians	1	1	0%	3	3	7%
Reproductive Health	1	128	23%	1	7	16%
STD Clinics						
Student Health	3	4	1%			
TOTAL	**57**	**552**	**100%**	**19**	**43**	**100%**

In Thurston County, the family planning providers reported the highest number of chlamydia cases. These providers reported 28% of the total. Reproductive health providers reported the second highest number of chlamydia cases (23%). Gonorrhea cases were most frequently reported by hospital providers (26%).

In 2004, 74% of chlamydia and 76% of gonorrhea cases indicating treatment date by health care providers in Thurston County were reported within 30 days to the STD Washington State Morbidity System. Treatment date for cases reported by providers in Thurston County, were missing on 6% of chlamydia and 2% of gonorrhea cases in 2004.

The **Healthy People 2010** national objectives for chlamydia incidence are:

Females aged 15-24 attending family planning clinics: 3%.

There is one (1) Region X Infertility Prevention Project (IPP) family planning clinic in Thurston County. The 2004 positivity rate for females was:

	Male			Female		
Site	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
PP of Western WA - Thurston	128	8	6.3	1,317	87	6.6

Females aged 15-24 attending STD clinics: 3%.
Males aged 15-24 attending STD clinics: 3%.

There is one (1) Region X IPP STD/reproductive health clinics in Thurston County. The 2004 positivity rate was:

	Male			Female		
Site	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
Thurston Co HD - Olympia	455	65	14.3	1,468	75	5.1

Other Region X IPP Sites in Thurston County include:

	Male			Female		
Site	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
Thurston Co HD - Olympia	80	2	2.5	172	2	1.2
Thurston County Juvenile - Olympia	2	0	0.0	0	0	0.0

See attachment A for Region X IPP screening criteria.

The **Healthy People 2010** national objective for gonorrhea incidence is 19 cases per 100,000.

Thurston County has met this goal with the 2004 rate of 19.7 cases per 100,000.

The Aptima test used to diagnose chlamydia is a combined test that will also diagnose gonorrhea. Gonorrhea positives from the Region X IPP sites include:

	Male			Female		
Family Planning Site	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
PP of Western WA - Thurston	128	1	0.8	1,319	2	0.2

	Male			Female		
STD/Reproductive Health Site	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
Thurston Co HD – Olympia	455	10	2.2	1,539	1	0.1

	Male			Female		
Other Sites	No. of Tests	No. of Pos.	Percent Pos.	No. of Tests	No. of Pos.	Percent Pos.
Thurston Co HD - Olympia	80	0	0.0	172	0	0.0
Thurston County Juvenile - Olympia	2	0	0.0	0	0	0.0

Appendix A: Data Sources, Analyses and Limitations

Cases: The number of cases identified and submitted by providers to local health jurisdictions and forwarded to the Washington State Department of Health, Office of Infectious Disease and Reproductive Health, STD/TB Services.

Population: Denominator population estimates for incidence rates are from Washington State Adjusted Population Estimates, Office of Financial Management (OFM), February 2004.

Incidence Rates: Incidence rates are calculated as the number of new episodes of a disease (not persons) in a given year divided by the total population (age and sex appropriate) for that year, expressed as a rate per 100,000. Incidence rates allow comparisons between two or more populations by standardizing the denominator and are the most appropriate statistic to use when investigating differences between groups. Rates should not be calculated for incident case totals fewer than five because the rates are unstable.

Data Reporting: Gonorrhea, chlamydia, syphilis, and herpes (initial infection) are reportable diseases to the local health jurisdictions and forwarded to the Department of Health. To be reported and included in surveillance data, disease definition must be met.

Disease Definitions:

- AIDS - Acquired Immunodeficiency Syndrome is the advanced stage of HIV-disease in humans and is characterized by severe suppression of immune response. Persons with AIDS are at risk for increased susceptibility to opportunistic infections, degradation of major organ systems and eventual death.
- Chancroid - a STD characterized by painful genital ulceration and inflammatory inguinal adenopathy caused by the bacterium *Haemophilus ducreyi*.
- Chlamydia- isolation of *Chlamydia trachomatis* from a clinical specimen by culture or non-culture methods that detect chlamydia antigen or genetic material.
- Gonorrhea - isolation of *Neisseria gonorrhoeae* from a clinical specimen by culture or non-culture methods or observation of Gram-negative intracellular diplococci in urethral or endocervical smears.
- Granuloma Inguinale (GI) - a slowly progressive ulcerative disease of the skin and lymphatics of the genital and perianal area.
- Herpes Simplex (initial infection only) - diagnostic criteria for reporting can be made through clinical observation of typical lesions and/or laboratory confirmation.
- HIV - Human Immunodeficiency Virus is a retrovirus causing HIV disease and AIDS in humans. This pathogen is transmitted from person to person through unprotected sexual contact, sharing of injection equipment and transfusion/transplantation with infected blood or tissue.
- Lymphogranuloma Venereum (LGV) - characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis, caused by the L1, L2 and L3 serovars of *Chlamydia trachomatis*.

- Syphilis - a complex sexual transmitted disease with a highly variable clinical course. See CDC guidelines for surveillance definition.

The diagnosing practitioner is responsible for providing the case information which includes patient demographics, source of diagnosis, limited clinical information including site of infection and treatment, and date of diagnosis.

Data Strengths: Sexually transmitted disease data may provide more timely information on behavioral trends in the community than diseases with similar modes of transmission particularly HIV/AIDS. There is a high level of participation in the STD surveillance system by private providers of STD services.

Data Limitations: Clinically diagnosed cases of STDs (without laboratory confirmation) may be missed through this surveillance system. Depending upon diagnosing practices, completeness of reporting may vary by source of health care.

Data Biases: Biases could exist in the data due to under-reporting, inability of certain populations to access medical services, error in laboratory reporting, or differential reporting or screening by disease and source of care. However, it is assumed that the number of cases that would fall into these categories is small and normally distributed, thus not significantly impacting the calculated STD rates.

Assumptions: It is assumed that the cases reported from year to year are independent of each other. One violation of this assumption could be if a person who has an STD one year is more likely to have an STD the following year. Also, repeat episodes of the same STD by the same person are not excluded from the numerator count; it is felt that these numbers are not large enough to significantly impact the calculated incidence rates. Finally, we have assumed that all rates follow a chi-square distribution.

Region X IPP screening criteria that are used at the 140 IPP clinics are as follows:

- Sexually active women 24 years and younger;
- Pregnant women;
- Women with mucopurulent cervicitis, cervical friability, or ectopy with inflammation or edema;
- Women with pelvic inflammatory disease (PID);
- Women planning to receive an intrauterine device;
- Women with a symptomatic sex partner;
- Women diagnosed with CT in the last 12 months; and
- Sex partners of persons with chlamydial infection.